



# HF Happenings

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the week of 21 March 2016

## HF Happenings is Late!

Your editor and his lovely lady packed the caravan and departed from Bloemfontein on Friday 18 March for the Aan-die-Oewer Caravan park in Orania in the Northern Cape [KG20fe], 'south of the border' - that is the ZS3/ZS4 border. We spent 6 nights there (and 7 days) relaxing, reading drinking wine, braaing and sleeping late! We can recommend Aan-die-Oewer, River Park (both KG20fe) and Die Sandgat (KG20ia) caravan parks - the first two in Orania and the last one about 7 km from Vanderkloof Dam with a small piece of KF29 in between. The grid squares are for those chasing maidens - ZS WAGS.

## K1JT is Amateur of the Year

Joe Taylor, K1JT, has been named as 2016 Dayton Hamvention Amateur of the Year. He won the Nobel Prize in Physics in 1993 for the discovery of the first orbiting pulsar, leading to observations that established the existence of gravitational waves.

Joe was first licensed in 1954 as KN2ITP. Since his retirement, he has been developing and enhancing digital protocols for weak-signal amateur radio communication, including JT65 and WSPR.



## "The Great Northern Way"

"The Great Northern Way" expedition stopped for a while at Dikson (mainland Russia), with a brief activity from nearby Dikson Island (AS-005) on 20 March. The expedition has now resumed its course along the Taimyr coast and can be followed on [www.ec-arctic.ru](http://www.ec-arctic.ru). There might be further activity from the Begichevskaya Kosa Islands and/or Kolchak Island (formerly known as Rastorguyev), whose IOTA status is being considered. They might count for IOTA groups AS-068 and AS-104 respectively. QSL via UA9OBA.

## Heard Island, VKOEK

The Braveheart arrived at Heard Island on 22 March around 16:00 local time (11:00 UTC) and VKOEK started activity around 16:40 UTC on the 23rd. After being at Atlas Cove with all stations up and running for some days, the team will set up the second camp at Spit. See <http://vkOek.org> for updates and [www.dxa3.org](http://www.dxa3.org) for log search and OQRS ("Order QSLs") for direct and bureau cards. Traditional paper cards go (direct only) to VKOEK Heard Island DXpedition, PO Box 17, Kenilworth, CV8 1SF, England. The logs are also uploaded to Club Log ([www.clublog.org/charts/?c=VKOEK](http://www.clublog.org/charts/?c=VKOEK)); the latest update (05:03 UTC on 25 March) shows 3 400 QSOs with 2 415 unique call signs.

## African DX

Africa DX Net - every Saturday afternoon from 14:00 UTC on 14,260 MHz hosted by Mike, V51MA, Leon, A25SL, and Tinus, ZS6MHK.



South African Radio League \* Suid-Afrikaanse Radioliga  
Member Society of the International Amateur Radio Union since 1925



The Gambia, C5. Leaving Belgium on 28 March, Pedro, ON7WP will be active as C5WP from the village of Buntung, The Gambia from 29 March to 2 April. At night, he will focus on 40 metres with some 80 m, during the daytime he will operate mainly on 15, 12 and 10 metres. He will also try and be active on 60 m (3 5357,0 kHz USB). On 3 to 8 April he will operate from the coastal area. Pedro is actively involved in a private charity organisation [www.SmileGambia.org](http://www.SmileGambia.org) and his operations will be limited to his spare time. QSL via ON7WP, direct only.

Togo, 5V. Werner, DL9MBI, Robert, DL6MFK, Armin, DF1AI, and Rudi, DL5MEV, are going to work as 5V7D from Kpeme between 24 March and 11 April. They will be active on 80 to 10 m using SSB, CW and RTTY. They also plan to operate EME. QSL via DL9MBI, direct, the bureau and ClubLog.

### African Islands

IOTA frequencies

CW: 28 040 24 920 21 040 18 098 14 040 10 114  
7 030 3 530 kHz

SSB: 28 560 28 460 24 950 21 260 18 128 14  
260 7 055 3 760 kHz

FT4JA Juan De Nova DXpedition News. The following was sent out on 23 March [edited]: After more than a year of work, we are happy to finally get into the thick of it. The team will be complete in Mayotte on Thursday 24 March, around noon! The schedule for the coming days is pretty full, with the last purchases and technical checks and the loading of the boat. We will sail away on Saturday 26 March. Our chief pilot will communicate updated information on the unloading and installation. At this time, we hope to be on the air on the evening of 29 March after a full day spent assembling. A page displaying in real time the progress of the team has been set up at [www.juandenovadx.com/en/track-us-in-real-time](http://www.juandenovadx.com/en/track-us-in-real-time)

As a reminder, we will use the band plan shared with our friends at VKOEK. Some windows are very narrow and we will have to live together in all understanding, without departing from the intended plan, at the risk of generating confusion and disruption between the two activities. The band plan is available on both websites. Our different pilots are available to transit information to the team (JJ3PRT, ON9CFG, N5FG). The 10 operators will not have access to their personal e-mails and because of a lack of internet connection; we will not be watching the DX-Cluster. No need to transit messages for us through that medium.

[www.juandenovadx.com/en/pilots](http://www.juandenovadx.com/en/pilots)

Every day, we will transmit via satellite, our logs to our chief pilot F5UKW who will upload them to ClubLog. However, the "leader board" feature will not be activated. Our pilots will make no modification or search of the log. If in doubt, work us again.

[www.juandenovadx.com/en/online-log](http://www.juandenovadx.com/en/online-log)

### March

- 18 – All schools close
- 19 and 20 – SARL VHF/UHF Field Day
- 20 – Autumn equinox, Palm Sunday
- 21 – Human Rights Day
- 22 - Closing date for April Radio ZS articles; World Water Day
- 23 - World Meteorological Day
- 24 - Purim
- 25 – Good Friday
- 26 – Two Oceans Marathon
- 27 - Easter Sunday
- 28 – Easter Monday / Family Day

### April

- 2 - RaDAR Challenge
- 5 - All schools open
- 7 - SARL 80 m QSO Party
- 9 - SARL Autumn QRP Contest
- 10 - SARL Youth Net at 15:00 UTC on 7 070
- 18 - World Amateur Radio Day
- 22 - Earth Day
- 23 - Pesach (1st day)
- 24 - ZS4 Sprint
- 25 - Closing date for May Radio ZS articles
- 27 - Freedom Day
- 30 - Pesach (8th Day)



The QSL Manager is Flo, F5CWU. He will process OQRS and the direct QSL requests as well as the cards received via the Bureau. The ClubLog's OQRS will be active by the end of the operation. We strongly recommend its use. Later, the logs will be loaded on LoTW and eQSL.

[www.juandenovadx.com/en/qsl-infos](http://www.juandenovadx.com/en/qsl-infos)

As part of our expedition on Juan de Nova Island, we are pleased to announce that a stamp set will be issued by T.A.A.F. QSL cards sent direct will automatically have the envelope/stamp. We will unveil this commemorative object later. Everyone connected to the FT4JA project would like to thank all of you who have already contributed in one way or another to the project. It would not be at this stage without the tremendous mobilization of clubs, foundations and individual donors. The early donation program will be closed on Friday 25 March at 12:00 UTC. The "donors" page of our website will not be updated further after that specific time.

[www.juandenovadx.com/en/how-to-help-us](http://www.juandenovadx.com/en/how-to-help-us)

73 and we will see you on the air in a few days, FT4JA - Juan de Nova 2016

Reminder for 6 m and EME [www.juandenovadx.com/en/6m-tep-eme-plan-for-ft4ja/](http://www.juandenovadx.com/en/6m-tep-eme-plan-for-ft4ja/)

## This week in History

(The week starting 21 March 2016)

1685 - Organist and composer Johann Sebastian Bach (21 March 1685 - 1750) was born in Eisenach, Germany. His output included thousands of compositions, many used in churches. Among his best-known works are The Brandenburg Concertos for orchestra, The Well-Tempered Clavier for keyboard, the St. John and St. Matthew passions and the Mass in B Minor

1874 - Harry Houdini (24 March 1874 - 1926) was born (as Erik Weisz) in Budapest, Hungary. He came to the USA with his family as an infant and lived in New York City. He began as a Coney Island magician and then became a world famous escape artist, known for escaping from chains, handcuffs, straightjackets, locked boxes and milk cans filled with water. He died on Halloween 1926 from a burst appendix and was buried in Queens, NY

1911 - American playwright Tennessee Williams (26 March 1911 - 1983) was born in Columbus, Mississippi. His works featured Southern settings and include The Glass Menagerie, Night of the Iguana, and two Pulitzer Prize winning plays A Streetcar Named Desire and Cat on a Hot Tin Roof

1918 - During World War I, the Second Battle of the Somme began as German General Erich von Ludendorff launched an all-out drive to win the war. The battle began with a five-hour artillery barrage followed by a rush of German troops. The offensive lasted until 6 April and resulted in the Germans gaining about 56 km of territory. Allied and German casualty figures for both battles approached 500 000. (21 March)

1943 - A suicide/assassination plot by German Army officers against Hitler failed, as the conspirators were unable to locate a short fuse for the bomb, which was to be carried in the coat pocket of General von Gersdorff to ceremonies Hitler was attending (21 March)

1989 - One of the largest oil spills in U.S. history occurred as the oil tanker Exxon Valdez ran aground in Prince William Sound off Alaska, resulting in 41 million litres oil leaking into the natural habitat over a stretch of 72 km (24 March)

1992 - Soviet Cosmonaut Serge Krikalev returned to a new country (Russia) after spending 313 days on board the Mir Space Station. During his stay in space, the Soviet Union (USSR) collapsed and became the Commonwealth of Independent States (26 March)

3019 (SR) Frodo and Samwise leave the road and turn south to Mount Doom (22 March)

3019 (SR) Frodo and Samwise make their last journey to the foot of Mount Doom (24 March)

2941 (SR) Thorin and Gandalf's chance meeting at the Prancing Pony in Bree (25 March)

3019 (SR) Frodo and Samwise reach the Sammath Naur (25 March)  
3019 (SR) Gollum seizes the Ring and falls in the Cracks of Doom  
3019 (SR) Downfall of Barad-dûr and the passing of Sauron

## Contest Calendar

This week's contests as compiled by Bruce Horn, WA7BNM. The period covered is 21 to 28 March 2016

### BARTG HF RTTY Contest

02:00 UTC, Mar 19 to 02:00 UTC 21 March

Mode: RTTY

Bands: 80, 40, 20, 15, 10 m

Classes: Single Op Expert All Band; Single Op All Band; Single Op All Band 6 Hours; Single Op; Single Band; Multi-Single; Multi-Multi

Max operating hours: Single Op: 30 hours with at least 3 hour rest period; Single Op 6 Hours: 6 hours; Multi-Op: 48 hours  
Exchange: RST, serial no and 4-digit time (UTC)

Work stations: Once per band

QSO Points: 1 point per QSO

Multipliers: DXCC countries once per band; JA, W, VE and VK areas once per band; Continents once regardless of band

Score Calculation: Total score = total QSO points x total country/area mults x continents

Submit logs by: 02:00 UTC 28 March 2016

E-mail logs to: (none)

Upload log at: <http://bartg.rsgbcc.org/cgi-bin/hfenter.pl>

Mail logs to: (none)

Find rules at: <http://www.bartg.org.uk/>

### Run for the Bacon QRP Contest

01:00 - 03:00 UTC 21 March

Mode: CW

Bands: 160, 80, 40, 20, 15, 10 m

Classes: Single Band; All Band

Max power: 5 watts

Exchange: RST, state, province or country and member no or power

Work stations: Once per band

QSO Points: 1 point per QSO with non-member; 3 points per QSO with member on same continent; 5 points per QSO with member on different continent

Multipliers: Each state, province or country once; Multiply mults by 2 if >50 members worked

Score Calculation: Total score = total QSO points x total mults

Submit logs by: 27 March 2016

E-mail logs to: (none)

Upload log at:

<http://fpgrp.org/pigrun/autolog.php>

Mail logs to: (none)

Find rules at: <http://fpgrp.org/pigrun/>

### Bucharest Contest

1800Z-2059Z 21 March

Mode: CW, SSB, Digital

Bands: 80, 40 m

Classes: Single Op - CW, SSB, digital or mixed - QRP or low - 2-band or single band; Multi-Op Low Power - CW, SSB, digital or mixed - 2-band or single band; SWL

Max power: LP: 100 watts; QRP: 5 watts

Exchange: YO: RS(T), QSO no and sector or county; non-YO: RS(T), QSO no and country code

Work stations: Once per mode

QSO Points: 2 points per QSO: YO3 - YO3 or YO - YO or YO - Foreign; 4 points per QSO: YO3 - YO or YO - YO3 or YO3 - Foreign

Multipliers: Each YO county; Each YO3 sector; Each country code

Score Calculation: Total score = total score of each segment (total QSO points x total mults)

Submit logs by: 23:59 UTC 5 April 2016

E-mail logs to: [fenyo3jw@yahoo.com](mailto:fenyo3jw@yahoo.com)

Mail logs to: (none)

Find rules at:

<http://yo3test201x.blogspot.ro/p/blog-page.html>



### SKCC Sprint

00:00 - 02:00 UTC 23 March

Mode: CW

Bands: 160, 80, 40, 20, 15, 10 m

Classes: (none)

Exchange: RST, state, province or country, name and SKCC no or power

Work stations: Once per band

QSO Points: 1 point per QSO; Bonus Points: 5 points per Centurion member QSO per band; 10 points per Tribune member QSO per band; 25 points per QSO with SKCC club call (K9SKC) per band

Multipliers: Each state, province or country once

Score Calculation: Total score = (total QSO points x total mults) and bonus points

Submit logs by: 23:59 UTC 25 March 2016

E-mail log summary to: (none)

Post log summary at:

[http://www.skccgroup.com/operating\\_activities/weekday\\_sprint/submit-display.php](http://www.skccgroup.com/operating_activities/weekday_sprint/submit-display.php)

Mail logs to: (none)

Find rules at:

[http://www.skccgroup.com/operating\\_activities/weekday\\_sprint/](http://www.skccgroup.com/operating_activities/weekday_sprint/)

### QRP Fox Hunt

01:00 - 02:30 UTC 23 March

Mode: CW

Bands: 40 m Only

Classes: Single Op - fox or hound

Max power: 5 watts

Exchange: RST, state, province or country, name and power output

QSO Points: 1 point per QSO

Multipliers: (none)

Score Calculation: Total score = total QSO points

Submit logs by: 02:30 UTC 24 March 2016

E-mail logs to: (see rules)

Mail logs to: (none)

Find rules at:

[http://www.qrpfoxhunt.org/winter\\_rules.htm](http://www.qrpfoxhunt.org/winter_rules.htm)

### Phone Fray

02:30 - 03:00 UTC 23 March

Mode: SSB

Bands: 160, 80, 40, 20, 15 m

Classes: Single Op

Max power: 100 watts

Exchange: NA: Name and state, province or country; non-NA: Name

Work stations: Once per band

QSO Points: NA station: 1 point per QSO; non-NA station: 1 point per QSO with an NA station

Multipliers: Each US state (including KH6/KL7) once per band; Each VE province/territory once per band; Each North American country (except W/VE) once per band

Score Calculation: Total score = total QSO points x total mults

Submit logs by: 03:00 UTC 25 March 2016

E-mail logs to: (none)

Post log summary at:

<http://www.3830scores.com>

Mail logs to: (none)

Find rules at:

[http://www.perluma.com/Phone\\_Fray\\_Content\\_Rules.pdf](http://www.perluma.com/Phone_Fray_Content_Rules.pdf)

### CWops Mini-CWT Test

13:00 - 14:00 UTC and 19:00 - 20:00 UTC 23 March and 03:00 - 04:00 UTC 24 March

Mode: CW

Bands: 160, 80, 40, 20, 15, 10 m

Classes: Single Op - QRP, low or high

Max power: HP: >100 watts; LP: 100 watts;

QRP: 5 watts

Exchange: Member: Name and member no; non-Member: Name and state, province or country

Work stations: Once per band

QSO Points: 1 point per QSO

Multipliers: Each call once

Score Calculation: Total score = total QSO points x total mults

Submit logs by: 04:00 UTC 26 March 2016

Post log summary at:

<http://www.3830scores.com>

Mail logs to: (none)

Find rules at:

<http://www.cwops.org/cwt.html>

RSGB 80 m Club Championship, SSB

20:00 - 21:30 UTC 24 March

Mode: SSB

Bands: 80 m Only

Classes: (none)  
Exchange: RS and serial no  
QSO Points: 1 point per QSO  
Multipliers: (none)  
Score Calculation: (see rules)  
Submit logs by: 23:59 UTC 31 March 2016  
Upload log at: <http://www.vhfcc.org/cgi-bin/hfenter.pl>  
Mail logs to: (none)  
Find rules at:  
<http://www.rsgbcc.org/hf/rules/2016/r80mcc.shtml>

QRP Fox Hunt  
01:00 - 02:30 UTC 25 March  
Mode: CW  
Bands: 80 m Only  
Classes: Single Op (Fox/Hound)  
Max power: 5 watts  
Exchange: RST, state, province or country, name and power output  
QSO Points: 1 point per QSO  
Multipliers: (none)  
Score Calculation: Total score = total QSO points  
Submit logs by: 02:30 UTC 26 March 2016  
E-mail logs to: (see rules)  
Mail logs to: (none)  
Find rules at:  
[http://www.qrpfoxhunt.org/winter\\_rules.htm](http://www.qrpfoxhunt.org/winter_rules.htm)

NCCC RTTY Sprint  
01:45 - 02:15 UTC 25 March  
Mode: RTTY  
Bands: (see rules)  
Classes: (none)  
Exchange: Serial no, name and QTH  
Score Calculation: Total score = total QSO points x total mults  
Submit logs by: 27 March 2016  
E-mail logs to: (none)  
Post log summary at:  
<http://www.3830scores.com/>  
Mail logs to: (none)  
Find rules at:  
<http://www.ncccsprint.com/rtty.html>

NCCC Sprint  
02:30 - 03:00 UTC 25 March

Mode: CW  
Bands: (see rules)  
Classes: (none)  
Exchange: Serial no, name and QTH  
Score Calculation: Total score = total QSO points x total mults  
Submit logs by: 27 March 2016  
E-mail logs to: (none)  
Post log summary at:  
<http://www.3830scores.com/>  
Mail logs to: (none)  
Find rules at:  
<http://www.ncccsprint.com/rules.html>

CQ WW WPX SSB Contest  
00:00 UTC 26 March to 23:59 UTC 27 March  
Mode: SSB  
Bands: 160, 80, 40, 20, 15, 10 m  
Classes: Single Op All Band - QRP, low or high - tribander or rookie; Single Op Single Band - QRP, low or high - tribander or rookie; Single Op Assisted All Band - QRP, low or high - tribander or rookie; Single Op Assisted Single Band - QRP, low or high - tribander or rookie; Multi-Single - low or high; Multi-Two; Multi-Multi  
Max operating hours: Single Op: 36 hours with off times of at least 60 minutes; Multi-Op: 48 hours  
Max power: HP: 1 500 watts; LP: 100 watts; QRP: 5 watts  
Exchange: RS and serial no  
Work stations: Once per band  
QSO Points: 6 points per 160, 80, 40 m QSO with different continent; 3 points per 20, 15, 10 m QSO with different continent; 2 points per 160, 80, 40 m QSO with same continent different country; 1 point per 20, 15, 10 m QSO with same continent different country; 4 points per 160, 80, 40 m QSO between stations in NA; 2 points per 20, 15, 10 m QSO between stations in NA  
1 point per QSO with same country  
Multipliers: Prefixes once  
Score Calculation: Total score = total QSO points x total mults  
Submit logs by: 23:59 UTC 1 April 2016  
E-mail logs to: [ssb@cqwpx.com](mailto:ssb@cqwpx.com)

Upload log at:

<http://www.cqwp.com/logcheck/>

Mail logs to: SSB WPX Contest, PO Box 481,  
New Carlisle, OH 45344, USA

Find rules at:

<http://www.cqwp.com/rules.htm>

FOC QSO Party

00:00 - 23:59 UTC 26 March

Mode: CW

Bands: 160, 80, 40, 20, 15, 10, VHF

Classes: Single Op

Exchange: FOC-Member: RST, name and  
member no; non-Members: RST and name

Work stations: Once per band

QSO Points: 1 point per QSO

Multipliers: (none)

Score Calculation: FOC-Member: Score =  
Total QSOs/Total Member QSOs; non-  
Member: Score = Total Member QSOs

Submit logs by: 9 April 2016

E-mail log summary to: [kz5d@aol.com](mailto:kz5d@aol.com)

Mail logs to: (none)

Find rules at: <http://q4foc.org/qsoparty/>

Low Power Spring Sprint

14:00 - 20:00 UTC 28 March

Mode: CW

Bands: 160, 80, 40, 20, 15, 10 m

Classes: Single Op Single Band; Single Op  
Two/Three Band; Single Op All Band

Max power: A: 1 watt; C: 5 watts; Q: 25  
watts; X: 50 watts; Y: 100 watts

Exchange: RST, 4-character grid square and  
power category (A, C, Q, X or Y)

QSO Points: 3 points per QSO with same  
continent; 9 points per QSO with different  
continent; 18 points per QSO with OM sta-  
tion

Multipliers: Each grid square once per band

Each prefix once per band

Score Calculation: Total score = total QSO  
points x total mults

Submit logs by: 27 April 2016

E-mail logs to: [om3kfv@zoznam.sk](mailto:om3kfv@zoznam.sk)

Mail logs to: Radioklub OM3KfV, PO Box 3,  
038 61 Vrútky, Slovakia

Find rules at:

[http://www.hornucopia.com/contestcal/lowpo-  
werspring-sprint2016.pdf](http://www.hornucopia.com/contestcal/lowpower-spring-sprint2016.pdf)

## Next Week's Contests

Phone Fray, 02:30 - 03:00 UTC 30 March

CWops Mini-CWT Test, 13:00 - 14:00 UTC and 19:00 - 20:00 UTC 30 March and 03:00 UTC-  
04:00 UTC 31 March

UKEICC 80 m Contest, 20:00 - 21:00 UTC 30 March

NCCC RTTY Sprint, 01:45 - 02:15 UTC 1 April

NCCC Sprint, 02:30 - 03:00 UTC 1 April

15-Meter SSTV Dash Contest, 00:00 UTC 2 April to 23:59 UTC 3 April

LZ Open 40 m Sprint Contest, 04:00 - 08:00 UTC 2 April

Mississippi QSO Party, 14:00 UTC 2 April to 02:00 UTC 3 April

Missouri QSO Party, 14:00 UTC 2 April to 04:00 UTC 3 April and 14:00 - 20:00 UTC 3 April

SP DX Contest, 15:00 UTC 2 April to 15:00 UTC 3 April

EA RTTY Contest, 16:00 UTC 2 April to 16:00 UTC 3 April

North American SSB Sprint Contest, 00:00 - 04:00 UTC 3 April

RSGB RoLo SSB, 19:00 - 20:30 UTC 3 April

RSGB 80 m Club Championship, CW, 19:00 - 20:30 UTC 4 April

ARS Spartan Sprint, 01:00 - 03:00 UTC 5 April

# VHF Happenings

## SA AMSAT gets a new Name

SA AMSAT has changed the SA in its name around and will now be known as AMSAT SA. The amateur radio satellite group made the decision to line up its name with the organisation's web address. It was confusing having the name and web address different. It now also follows the international trend of other AMSAT organisations. AMSAT SA has also been registered as a non-profit company and is in the process of applying for tax exemption status with SARS.

Membership conditions of the organisation remain the same. To get more information visit the [www.amsatsa.org.za](http://www.amsatsa.org.za) or download a free copy of the March 2016 Ezine available from Monday 28 March 2016

## Forty Students Learn About Amateur Radio and Satellites

On Wednesday last week, 40 learners from schools around Pretoria attended a morning workshop about amateur radio and satellites. The workshop was part of the Innovation Hub holiday programme during which grade 10 and 11 learners are exposed to various work and science situations. AMSAT SA was invited to talk about space related activities. Nico van Rensburg, ZS6QL, and Hans van de Groenendaal, ZS6AKV, presented the workshop. The workshop started with a talk about amateur radio illustrated by short video clips. During practical demonstrations the learners were shown how a transponder works, how satellites orbit around the world and how antennas are used to track satellites including using smartphone applications.

## How to Work Tropo Scatter on VHF

The scattering of VHF radio waves as well as light waves are caused by dust particles and disturbances in the atmosphere, where VHF signals or higher could travel a long way. Tropo Scatter is present daily throughout the year, but produces very weak signals on 50 MHz to 10 GHz over distances up to 1 000 km, which can be worked with high gain Yagi arrays, high power and sensitive receivers. The deep QSB cycles are caused by phase differences of signals travelling along different paths to the receiver. When you hear a Tropo Scatter signal fading out then stay tuned, it will return to its full strength within a minute or so. John, ZS2AH, at East London and Mike, ZS2FM, at Port Elizabeth used to work each other nightly over this 250 km path on 144 MHz FM during very poor propagation conditions when there were no temperature inversions present, it was like surfing a wave at the peak of the QSB cycle.

Two-way contacts have been made between Divisions 1 and 5 during the early morning as well as at night via this mode, which was proven by Naz, ZS1NAZ, in Cape Town and Ben, ZS5QM, at Hilton across the Drakensberg while using 400 Watts. It is possible to work distances of several hundred kilometres almost daily via this scatter mode using a VHF transmitter with only 100 Watts output and a horizontal Yagi beam antenna, but signals are strongest during early morning and late evening. Tropo Scatter signals with its deep QSB are always very weak in comparison with Tropo Enhancement and Ducting, which are both weather related.

## Bristol student balloon mission

On 21 March, the UBSEDS14 balloon, launched by University of Bristol students, completed its circumnavigation of the Northern Hemisphere.

During the flight, at an altitude of about 11,5 km, the balloon transmitted telemetry data at 4 minute intervals using Contestia 16/1000 on 434,600 MHz USB, with an output power of just 3 mW. Each telemetry packet was preceded by 10 seconds of 1 Hz pips for manual alignment and a RSID tone for automatic alignment with suitable software. Additionally the payload had the capability for 144 MHz APRS.



## FUNcube transponder on EO-79 active

On 25 March 2016, the EO-79 SSB/CW transponder was activated and will be available for a prolonged period.

The FUNcube transponder subsystem on QB50p1 (EO-79) had been provided by AMSAT-UK and AMSAT-NL and is a similar subsystem as on FUNcube-1, but without the telemetry downlink circuitry.

The current software running on EO-79 does experience occasional reboots. When these reboots happen, the transponder is automatically turned off and will have to be turned back on by a command station. The FUNcube team has selected a few command stations to do so, but be advised the transponder may be off.

TLEs:

AMSAT keps name: EO-79

Celestrak keps Name: QB50P1

Celestrak file: cubesat.txt

NORAD # 40025

COSPAR designator 2014-033-R

Frequencies:

Uplink: 435,035-435,065 MHz LSB

Downlink: 145,935-145,965 MHz USB

EO-79 has been set to only beacon the normal AX.25 beacon every 30 seconds instead of 10 seconds. The beacon frequency is 145,815 MHz and consists of AX.25 frames on BPSK. More details about the downlink can be found on the ISIS HAM page at

<http://isispace.nl/HAM/qb50p.html>

Just like FUNcube-1, the crystal oscillator circuits exhibit drift with temperature. This means manual tuning will probably work best.

Lastly, the commanding team availability will be limited over Easter, so please report the transponder being on or off on the status page of AMSAT <http://www.amsat.org/status/>. It does not appear in the table, but it does in the reporting drop-down.

## VHF/UHF Contests

UBA Spring 6 m contest, 06:00 - 10:00 UTC 3 April

Items used with acknowledgement to the ARRL Letter, the ARRL DX News, the ARRL Contest Update, OPDX Bulletin, 425 DX Bulletin, DXNL Newsletter, WIA-News, the RSGB News, DxCoffee, Southgate ARC News, DX World and the Amateur Radio Newsletter